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EXAMINER

SWERDLOW, DANIEL

ART UNIT	PAPER NUMBER
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2644

DATE MAILED: 04/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

08/777,958

Applicant(s)

HAMILTON ET AL.

Examiner

Daniel Swerdlow

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 November 2004.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

For convenience, examiner repeats below the rejections made in the prior Office action, mailed on 23 August 2004 that are maintained. These rejections are maintained for reasons stated below under the heading *Response to Arguments*.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 2, 3 and 7 through 10 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for an audio speaker system according to Claim 1 wherein the speaker is disposed in the rearward section of the trunk, does not reasonably provide enablement for the speaker occupying negligible useful trunk volume to cause a smaller decrease in calculated trunk volume than would occur with said one speaker mounted in the rear deck. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. Specifically, the inventions of Claims 2 and 7 require a low frequency speaker of sufficiently small size and regular shape to occupy negligible space by fitting into a rear trunk corner as depicted in applicant's Figures 1, 2 and 6. This requires a low frequency speaker the approximate size and shape of a standard brick. At the time of the invention, low frequency speakers of this size and shape were not known to those of ordinary skill in the art. Evidence of this is found in Ziffer (March). In the paragraph spanning the third and fourth columns of page 48, a professional car audio installer is quoted indicating that the Bazooka bass tubes were the

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most compact bass speakers available at the time of the invention. In the appeal brief filed on 30 October 2003, applicant states: "it is impossible to put these large Bazooka bass speakers in the rear trunk corner at the rear of the vehicle". As such, applicant admits that the most compact bass speaker known to one of ordinary skill in the art at the time of the invention could not be employed as claimed. Applicant's disclosure provides no information on how to produce a low frequency speaker of the size and shape necessary to be employed as claimed. Claims 3 and 8 through 10 depend from Claims 2 or 7. As such, the claims are not enabled. In addition, Claims 3 and 8 require rear corner mounting and so claim a compactness of the speaker beyond what is required by Claims 2 and 7. Therefore the failure of enablement is greater for these claims. In order to advance prosecution to the maximum possible extent, examiner presents below prior art rejections for Claims 2 and 7 and claims depending therefrom based on the interpretation that either (1) the invention comprehends a vehicle with sufficient space between the interior trunk trim and the vehicle outer shell to contain a bass speaker or (2) applicant's disclosure admits that the occupying of negligible useful trunk volume and the smaller decrease in calculated useful trunk volume is inherent in the rear corner mounting.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 2, 3 and 7 through 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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5. Claims 2 and 7 recite the limitation "said one speaker mounted in said rear deck". There is insufficient antecedent basis for this limitation in the claim. Claim 1, from which Claim 2 depends and the antecedent portion of Claim 2 recite the limitation "at least one speaker", which encompasses one or a plurality of speakers. As such, it is unclear whether "said one speaker" refers to all speakers in a plurality, one speaker in a plurality or a single speaker that is not part of a plurality. For the purpose of this Office action, examiner assumes the recitation "said one speaker" is intended as "said at least one speaker".

6. Claims 2 and 3 claim a speaker system "wherein said at least one speaker is disposed in a rearward section of the trunk occupying negligible useful trunk volume to cause a smaller decrease in calculated trunk volume than would occur with said [at least] one speaker mounted in said rear deck." Applicant states in the disclosure that the "reference to negligible useful trunk volume means that the [speaker] enclosure portion in the useful trunk volume is a small percentage of the useful trunk volume" (page 3, lines 8-10). As is clear from applicant's Fig. 6, the amount of useful trunk volume occupied by the speaker depends on the size and shape of the vehicle trunk. Applicant has depicted a large trunk with significant volume between the vehicle shell and the cosmetic trim resulting in only a small part of the speaker occupying useful volume. In a vehicle with a smaller trunk and less volume between the vehicle shell and the cosmetic trim, a larger portion of the speaker would occupy useful volume. Applicant claims the invention as a speaker system. As such, the limitations of the claimed invention cannot be made clear by reference to a vehicle of uncertain configuration. The claim could read on a particular speaker system when it is installed in one vehicle, but not on the same speaker system installed in a different vehicle. Similarly, whether a speaker disposed in a rearward section of the trunk

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would “cause a smaller decrease in calculated trunk volume than would occur with said one speaker mounted in said rear deck” depends on the configuration of the vehicle. Since the configuration of the vehicle is not defined beyond a general recitation of vehicle elements (i.e., passenger compartment, spare tire compartment, trunk, trunk floor, dividing portion and rear deck), the claim is indefinite. In order to advance prosecution to the maximum possible extent, examiner presents below prior art rejections for Claims 2 and 7 and claims depending therefrom based on the interpretation that either (1) the invention comprehends a vehicle with sufficient space between the interior trunk trim and the vehicle outer shell to contain a bass speaker or (2) applicant’s disclosure admits that the occupying of negligible useful trunk volume and the smaller decrease in calculated useful trunk volume is inherent in the rear corner mounting. This second interpretation is further supported by the fact that the indefinite claims do not limit the rear deck mounting orientation and position of the speaker(s) that serve as a basis for comparison for the claimed configuration. As such, the prior art rear corner mounting configuration need only be more space efficient than the least space efficient possible rear shelf mounting of the same speaker(s) (e.g., extending rearward along the center line of the car) to meet the claim.

7. Claim 3 is indefinite due to dependence on Claim 2.

8. Claims 8 through 10 are indefinite due to dependence from Claim 7.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1 through 4 are rejected under 35 U.S.C. 102(a) as being anticipated by Ziffer (May) (Car Audio and Electronics, May 1991).

11. Claim 1 claims an audio speaker system for a vehicle. Ziffer (May) discloses a “full-blown sound system” (page 39, 2nd paragraph) including tweeters and woofers (i.e., an audio speaker system) (page 41, photos) for a white 1990 Mazda Protégé (i.e., a vehicle) (page 39, 2nd paragraph). As is visible in the lower photograph on page 40, the vehicle disclosed has a passenger compartment (visible through the rear window seen between the raised trunk lid and the rear trunk lip), a spare tire compartment (visible around the spare tire), a trunk (page 40, photo caption) with a trunk floor (page 40, 1st column, 1st full paragraph), a dividing portion (visible in a closed position in upper photograph on page 40 and in an open position in the lower photograph on page 40) and a rear deck (page 42, lower photograph and associated caption) with the dividing portion and rear deck separating the trunk from the passenger compartment. Ziffer (May) further discloses the woofers (i.e., at least one low frequency speaker) disposed within the trunk of the vehicle (page 40, paragraph spanning 3rd and 4th columns and 2nd complete paragraph in 4th column) at the trunk rear in a location spaced from the passenger compartment by the portion of the trunk extending to the front of the vehicle (top photograph on page 41 shows the portion of the trunk extending to the front of the vehicle to the right of the woofer grille). The woofers disclosed by Ziffer (May) are clear of the rear deck (lower photograph on page 41 shows clearance between woofers and rear deck), above the trunk floor (top photograph

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on page 41 shows the disposition of the woofer above the trunk floor) and outside the spare tire compartment (lower photograph on page 40 shows woofers outside the spare tire compartment).

12. Regarding Claim 2, Ziffer (May) further discloses woofers disposed in a rearward section of the trunk (top photograph on page 41 shows the portion of the trunk extending to the front of the vehicle to the right of the woofer grille) and flush mounted in the trunk walls (i.e., occupying no useful trunk volume) (page 40, lower photograph) and hence causing a smaller decrease in calculated trunk volume than would occur with the speakers mounted in the rear deck.

13. Regarding Claim 3, Ziffer (May) further discloses woofers disposed in a rear trunk corners (page 40, both photographs).

14. Regarding Claim 4, Ziffer (May) further discloses creation of woofer enclosures with fiberglass back walls built to conform to the shape of the car (page 40, paragraph spanning 3rd and 4th columns).

15. Claims 1 and 4 through 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Ziffer (March) (Car Audio and Electronics, March 1991). These rejections rely on the embodiment depicted in the bottom photograph on page 48 in Ziffer (March) showing the bass tubes placed some distance rearward of the trunk front wall.

16. Claim 1 claims an audio speaker system for a vehicle. Ziffer (March) discloses bass tubes (i.e., an audio speaker system) (page 48, bottom photo) for a Volvo 740 Turbo (i.e., a vehicle) (page 47, 1st paragraph). As is visible in the photograph on page 47, the vehicle disclosed has a passenger compartment (visible through the side windows), a spare tire compartment (page 48, top photo shows gap in carpet between spare tire compartment lid and

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trunk floor), a trunk (page 48, top photo caption) with a trunk floor (page 48, top photo), a trunk front wall (i.e., dividing portion) (page 48, last paragraph) and a rear shelf (i.e., rear deck) (while not clearly depicted or described in Ziffer (March), evidence of the inherency of a rear shelf in a 1990 Volvo 740 Turbo sedan is found in Justin: "There was no factory rear shelf speaker in this car, so I had to saw out holes in the back"), with the dividing portion and rear shelf separating the trunk from the passenger compartment. Ziffer (March) further discloses the bass tubes (i.e., at least one low frequency speaker) disposed within the trunk of the vehicle (page 48, lowest photograph) at the trunk rear in a location spaced from the passenger compartment by the portion of the trunk extending to the front of the vehicle (i.e., toward the upper right corner of the photograph). The bass tubes disclosed by Ziffer (March) are clear of the rear deck, above the trunk floor and outside the spare tire compartment (bottom photograph on page 48).

17. Regarding Claim 4, Ziffer (March) further discloses bass tube enclosures (page 48, top photo).

18. Regarding Claim 5, applicant discloses that the front seat frequency response hole and rear seat frequency response peak are the result of using deck-mounted speakers (page 3, lines 13-25). As shown below apropos of Claim 6, the vehicle disclosed in Ziffer (March) does not use deck mounted speakers or have rear deck speaker holes. As such, it is inherently characterized by freedom from the undesirable front seat frequency response hole and rear seat frequency response peak.

19. Regarding Claim 6, the rear shelf (i.e., rear deck) of the 1990 Volvo 740 Turbo sedan has no speaker holes in the rear deck. Evidence of the rear shelf without speaker holes in a 1990 Volvo 740 Turbo sedan is found in Justin: "There was no factory rear shelf speaker in this car, so

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I had to saw out holes in the back.” Ziffer (March) further discloses that a design consideration was to not cut holes in the vehicle (page 48, paragraph spanning 3rd and 4th columns) and that the vehicle was purchased without a factory sound system (paragraph spanning pages 47 and 48). The Ziffer article is directed to a complete description of the vehicle sound system and makes no mention of rear shelf speakers or rear shelf speaker holes. As such, it is clear that the rear deck in the vehicle disclosed in Ziffer (March) is free of speaker holes.

Claim Rejections - 35 USC § 103

20. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

21. Claims 2 through 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ziffer (May) in view of Bazooka.

22. Regarding Claim 2, as stated above apropos of Claim 1, Ziffer (May) anticipates all elements of that claim. Therefore Ziffer (May) is shown to anticipate all elements of Claim 2 except the at least one speaker being disposed in a rearward section of the trunk occupying negligible useful trunk volume to cause a smaller decrease in calculated trunk volume than would occur with said [at least] one speaker mounted in said rear deck. Bazooka discloses a woofer configuration (third example) for use in a vehicle similar to the one disclosed in Ziffer (May) in which the woofers are disposed adjacent to and parallel to the sides of the trunk and “directed to the rearmost corner of the trunk”. Further, it is clear from the first and second

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example of Bazooka that the woofer is intended to be disposed "3-4 inches from the wall the woofer is facing" (i.e., the rear of the trunk). As such, Bazooka discloses the woofer disposed in a rearward section of trunk. The disposition adjacent and parallel to the side of the trunk and 3-4 inches the rear of the trunk places the woofer in a rear trunk corner of the vehicle. It would have been obvious to one skilled in the art at the time of the invention to apply the woofer configuration taught by Bazooka to the vehicle sound system taught by Ziffer (May) for the purpose of reducing installation time, effort and cost by utilizing a ready-made subwoofer instead of fabricating one from raw materials. Applicant states in the disclosure that "placement of the speaker enclosure is preferably in a corner of the vehicle trunk occupying negligible useful trunk volume" (page 2, lines 17-20) and "because of the way auto manufacturers calculate useful trunk volume, the enclosure in the corner of the trunk results in a smaller decrease in calculated useful trunk volume than do speakers mounted in the rear deck" (page 2, lines 27-31). As such, applicant admits that the occupying of negligible useful trunk volume and the smaller decrease in calculated useful trunk volume is inherent in the rear corner mounting. As such, the combination of Ziffer (May) and Bazooka makes obvious all elements of Claim 2.

23. Regarding Claim 3, as shown above apropos of Claim 2, the combination of Ziffer (May) and Bazooka makes obvious the speaker located in a rear trunk corner at the rear of the vehicle.

24. Regarding Claim 4, Bazooka further discloses the woofers mounted in enclosures (top and bottom illustrations).

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25. Claims 1 through 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ziffer (March) in view of Bazooka. These rejections rely on the embodiment depicted in the top photograph on page 48 in Ziffer (March) showing the bass tubes placed near the trunk front wall.

26. Claim 1 claims an audio speaker system for a vehicle. Ziffer (March) discloses bass tubes (i.e., an audio speaker system) (page 48, top photo) for a Volvo 740 Turbo (i.e., a vehicle) (page 47, 1st paragraph). As is visible in the photograph on page 47, the vehicle disclosed has a passenger compartment (visible through the side windows), a spare tire compartment (page 48, top photo shows gap in carpet between spare tire compartment lid and trunk floor), a trunk (page 48, top photo caption) with a trunk floor (page 48, top photo), a trunk front wall (i.e., dividing portion) (page 48, last paragraph) and a rear shelf (i.e., rear deck) (while not clearly depicted or described in Ziffer (March), evidence of the inherency of a rear shelf in a 1990 Volvo 740 Turbo sedan is found in Justin: "There was no factory rear shelf speaker in this car, so I had to saw out holes in the back"), with the dividing portion and rear shelf separating the trunk from the passenger compartment. Ziffer (March) further discloses the bass tubes (i.e., at least one low frequency speaker) disposed within the trunk of the vehicle (page 48, top photograph). The bass tubes disclosed by Ziffer (March) are above the trunk floor and outside the spare tire compartment (top photograph on page 48). Therefore Ziffer (March) is shown to anticipate all elements of Claim 1 except the speaker(s) disposed at the trunk rear in a location spaced from the passenger compartment by the portion of the trunk extending to the front of the vehicle such that the speaker(s) is/are clear of the rear deck. Bazooka discloses a woofer configuration (third example) for use in a vehicle similar to the one disclosed in Ziffer (March) in which the woofers are disposed adjacent to and parallel to the sides of the trunk and "directed to the rearmost corner

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of the trunk". Further, it is clear from the first and second example of Bazooka that the woofer is intended to be disposed "3-4 inches from the wall the woofer is facing" (i.e., the rear of the trunk). As such, Bazooka discloses the woofer disposed in a rearward section of the trunk. The disposition adjacent and parallel to the side of the trunk and 3-4 inches the rear of the trunk places the woofer in a rear trunk corner of the vehicle (i.e., at the trunk rear in a location spaced from the passenger compartment by the portion of the trunk extending to the front of the vehicle such that the speaker(s) is/are clear of the rear deck). The Bazooka reference is produced by the manufacturer of the bass tubes disclosed in Ziffer (March) and represents rear corner mounting as the preferred configuration for a sedan. It would have been obvious to one skilled in the art at the time of the invention to apply the woofer configuration taught by Bazooka to the vehicle sound system taught by Ziffer (March) for the purpose of ensuring proper function of the bass tube by installing according to the manufacturer's recommendation.

27. Regarding Claim 2, as stated above apropos of Claim 1, the combination of Ziffer (March) and Bazooka makes obvious all elements of that claim. Therefore the combination is shown to make obvious all elements of Claim 2 except the at least one speaker being disposed in a rearward section of the trunk occupying negligible useful trunk volume to cause a smaller decrease in calculated trunk volume than would occur with said [at least] one speaker mounted in said rear deck. As shown above apropos of Claim 1, the combination makes obvious rear corner mounting of the bass tubes. Applicant states in the disclosure that "placement of the speaker enclosure is preferably in a corner of the vehicle trunk occupying negligible useful trunk volume" (page 2, lines 17-20) and "because of the way auto manufacturers calculate useful trunk volume, the enclosure in the corner of the trunk results in a smaller decrease in calculated useful

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trunk volume than do speakers mounted in the rear deck” (page 2, lines 27-31). As such, applicant admits that the occupying of negligible useful trunk volume and the smaller decrease in calculated useful trunk volume is inherent in the rear corner mounting. As such, the combination of Ziffer (March) and Bazooka makes obvious all elements of Claim 2.

28. Regarding Claim 3, as stated above apropos of Claim 2, the combination of Ziffer (March) and Bazooka makes obvious all elements of that claim. Further, as shown above apropos of Claim 1, the combination makes obvious rear corner mounting of the bass tubes. As such, the combination of Ziffer (March) and Bazooka makes obvious all elements of Claim 3.

29. Regarding Claim 4, Bazooka further discloses the woofers mounted in enclosures (top and bottom illustrations).

30. Regarding Claim 5, applicant discloses that the front seat frequency response hole and rear seat frequency response peak are the result of using deck-mounted speakers (page 3, lines 13-25). As shown below apropos of Claim 6, the vehicle disclosed in Ziffer (March) does not use deck mounted speakers and does not have rear deck speaker holes. Therefore, it is inherently characterized by freedom from the undesirable front seat frequency response hole and rear seat frequency response peak. As such, the combination of Ziffer (March) and Bazooka makes obvious all elements of Claim 5.

31. Regarding Claim 6, the rear shelf (i.e., rear deck) of the 1990 Volvo 740 Turbo sedan has no speaker holes in the rear deck. Evidence of the rear shelf without speaker holes in a 1990 Volvo 740 Turbo sedan is found in Justin: “There was no factory rear shelf speaker in this car, so I had to saw out holes in the back.” Ziffer (March) further discloses that a design consideration was to not cut holes in the vehicle (page 48, paragraph spanning 3rd and 4th columns) and that the

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vehicle was purchased without a factory sound system (paragraph spanning pages 47 and 48).

The Ziffer article is directed to a complete description of the vehicle sound system and makes no mention of rear shelf speakers or rear shelf speaker holes. Therefore, it is clear that the rear deck in the vehicle disclosed in Ziffer (March) is free of speaker holes. As such, the combination of Ziffer (March) and Bazooka makes obvious all elements of Claim 6.

32. Regarding Claim 7, as stated above apropos of Claim 6, the combination of Ziffer (March) and Bazooka makes obvious all elements of that claim. Therefore the combination is shown to make obvious all elements of Claim 7 except the at least one speaker being disposed in a rearward section of the trunk occupying negligible useful trunk volume to cause a smaller decrease in calculated trunk volume than would occur with said [at least] one speaker mounted in said rear deck. As shown above apropos of Claim 1, the combination makes obvious rear corner mounting of the bass tubes. Applicant states in the disclosure that "placement of the speaker enclosure is preferably in a corner of the vehicle trunk occupying negligible useful trunk volume" (page 2, lines 17-20) and "because of the way auto manufacturers calculate useful trunk volume, the enclosure in the corner of the trunk results in a smaller decrease in calculated useful trunk volume than do speakers mounted in the rear deck" (page 2, lines 27-31). As such, applicant admits that the occupying of negligible useful trunk volume and the smaller decrease in calculated useful trunk volume is inherent in the rear corner mounting. As such, the combination of Ziffer (March) and Bazooka makes obvious all elements of Claim 7.

33. Regarding Claim 8, as stated above apropos of Claim 7, the combination of Ziffer (March) and Bazooka makes obvious all elements of that claim. Further, as shown above

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apropos of Claim 1, the combination makes obvious rear corner mounting of the bass tubes. As such, the combination of Ziffer (March) and Bazooka makes obvious all elements of Claim 8.

34. Regarding Claim 9, Bazooka further discloses the woofers mounted in enclosures (top and bottom illustrations).

35. Regarding Claim 10, applicant discloses that the front seat frequency response hole and rear seat frequency response peak are the result of using deck-mounted speakers (page 3, lines 13-25). As shown above apropos of Claim 6, the vehicle disclosed in Ziffer (March) does not use deck mounted speakers or have rear deck speaker holes. Therefore, it is inherently characterized by freedom from the undesirable front seat frequency response hole and rear seat frequency response peak. As such, the combination of Ziffer (March) and Bazooka makes obvious all elements of Claim 10.

Response to Arguments

36. In the second complete paragraph on page 2 of the response filed 23 November 2004, applicant requests identification of addressees of and copies of responses to an e-mail message received by the assignee regarding art pertinent to this application. Examiner is not familiar with this e-mail message. Providing the sender's name and e-mail address and the date of transmission might be helpful in identifying the message in question.

37. **Applicant's arguments regarding the rejection of Claims 5 and 10 under 35 USC §112, first paragraph, enablement are persuasive.**

38. In the first complete paragraph on page 4 of the response, applicant admits that the claimed frequency response characteristics are inherently "achieved with the low frequency

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speaker disposed within the trunk of the vehicle at the trunk rear and the rear deck free of speaker holes". Since the claimed characteristics are inherently achieved according to the disclosed exemplary embodiment, the claims are enabled. As such, the rejections of Claims 5 and 10 on these grounds under 35 USC §112, first paragraph are withdrawn. Note that the rejection of Claim 10 on other grounds under 35 USC §112, first paragraph is maintained for reasons stated below.

39. Applicant's remaining arguments in the response filed 23 November 2004 have been fully considered but they are not persuasive.

40. In the first complete paragraph on page 3 of the response, applicant traverses the rejection of Claims 2, 3 and 7 through 10 under 35 USC §112, first paragraph, enablement.

41. While, as applicant points out, this ground of rejection was not previously applied during prosecution, that omission does not constitute evidence that the claims are enabled by the original disclosure. Further, as stated above under *Claim Rejections, 35 USC §112*, applicant raised the issue of the impossibility of mounting even a very compact low frequency loudspeaker so as to conform to the limitations of the claims in the appeal brief filed 30 October 2003. As such, the rejection was made in the first Office action following applicant's spontaneous admission that one skilled in the art would not be able to practice the claimed invention.

42. Applicant alleges that the disclosed exemplary embodiment and associated frequency responses constitute enablement. Examiner respectfully disagrees. The exemplary embodiment disclosed in Figs. 1 and 2, page 1: lines 21-26 and page 2: line 11-27 depict and describe a low-frequency speaker small enough to be tucked away in corner of a car trunk. At the time of the invention, low frequency speakers of this size were not known to those of ordinary skill in the

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art. Evidence of this is found in Ziffer (March). In the paragraph spanning the third and fourth columns of page 48, a professional car audio installer is quoted indicating that the Bazooka bass tubes were the most compact bass speakers available at the time of the invention. Since applicant admits the impossibility of mounting the Bazooka bass tube so as to conform to the limitations of the claims, the claims are not enabled. Applicant has presented no evidence to indicate that at the time of the invention a low frequency speaker that could be applied as described in the claims was available to one of ordinary skill in the art. As such, the rejections are maintained.

43. **In the last complete paragraph on page 4 through the third complete paragraph on page 5 of the response, applicant traverses the rejection of Claims 2, 3 and 7 through 10 under 35 USC §112, second paragraph, indefiniteness.**

44. Applicant alleges that the specification makes clear the limitations of the claims. Examiner respectfully disagrees. The indefiniteness of Claims 2 and 7 due to lack of antecedent basis stems from the recitation “said one speaker” following the recitations “at least one speaker” and “said at least one speaker”. Because the recitation “at least one speaker” comprehends a plurality of speakers, the subsequent recitation of “said one speaker” is indefinite since it does not indicate to which one of the plurality it refers. Since the specification makes no reference to an embodiment with more than one speaker, it cannot resolve the indefiniteness.

45. Further indefiniteness in Claims 2 and 7 stems from the dependence of the claimed invention on the dimensions of the vehicle in which it is installed, as shown above under *Claim Rejections, 35 USC §112*. Because the claim could read on a speaker system installed in one vehicle but not on the same speaker system installed in another vehicle, the claim is indefinite.

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The specification does not render the claim definite since the descriptions and depictions of the vehicle therein are vague and generic. As such, the rejections are maintained.

46. In the last complete paragraph on page 5 through the second complete paragraph on page 6 of the response, applicant traverses the rejection of Claims 1 through 4 as being anticipated by Ziffer (May) under 35 USC §102(a).

47. Applicant alleges that Ziffer (May) fails to disclose the speakers occupying negligible useful trunk volume as claimed. Examiner respectfully disagrees. Applicant's disclosure admits that useful trunk volume does not include "volumes that are ... behind cosmetic panels identified as cosmetic trim in the top view of a trunk in FIG. 5". The fronts of the enclosures disclosed in Ziffer (May) constitute such cosmetic panels and/or trim and, as such, the space behind them is not useful trunk volume, but rather constitutes "negligible space" as defined by applicant's disclosure. It can make no difference to the patentability of the speaker system whether the car was produced by the factory with a certain cosmetic trim configuration, or was subsequently modified to achieve that configuration. As such, the rejections are maintained.

48. In the first complete paragraph on page 7 of the response, applicant traverses the rejection of Claims 1 and 4 through 6 as being anticipated by Ziffer (March) under 35 USC §102(b).

49. Applicant alleges that Ziffer (March) fails to disclose the vehicle is characterized by a front seat frequency response and a rear seat frequency response constructed and arranged to be free of an undesirable peak in the rear seat frequency response of said vehicle between 80-100 Hz and free of an undesirable hole between 60-80 Hz in the front seat frequency response of the vehicle. Examiner respectfully disagrees. As shown above, applicant has admitted that the

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claimed frequency response characteristics are inherent in a vehicle where the low frequency speaker is trunk-mounted and the rear deck is free of holes. As shown above under *Claim Rejections*, 35 USC §102, the reference discloses these elements and, therefore, meets the claims. As such, the rejections are maintained.

50. **In the second complete paragraph on page 7 through the last complete paragraph on page 9 of the response, applicant traverses the rejection of Claims 2 through 4 as being obvious in view of Ziffer (May) and Bazooka under 35 USC §103(a).**

51. Applicant alleges that the “secondary reference [i.e., Bazooka] fails to disclose the at least one speaker being disposed in rearward section of the trunk occupying negligible useful volume to cause a smaller decrease in calculated trunk volume than would occur with the one speaker mounted in the rear deck”. Examiner respectfully disagrees. The depiction of sedan mounting in the Bazooka reference in light of the statement in that reference that the speaker should be placed 3-4 inches from the wall it is facing meet the limitation “the at least one speaker being disposed in rearward section of the trunk”. As stated above, in maintaining that the claim is not rendered indefinite by the variability of vehicle configuration, applicant admits the inherency of meeting the limitation “occupying negligible useful volume to cause a smaller decrease in calculated trunk volume than would occur with the one speaker mounted in the rear deck” in the rear corner disposition of the speakers disclosed by the Bazooka reference. As such, the rejections are maintained.

52. **In the last complete paragraph on page 10 of the response, applicant traverses the rejection of Claims 1 through 10 as being obvious in view of Ziffer (March) and Bazooka under 35 USC §103(a).**

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53. Applicant's arguments are limited to the assertion that Ziffer (March) fails to anticipate Claim 1. Examiner respectfully disagrees for reasons stated above.

54. In the first complete paragraph on page 11 of the response, applicant alleges that examiner has repeated withdrawn rejections. Examiner respectfully disagrees. While certain similarities exist between the withdrawn rejections and those made in the prior Office action mailed on 23 August 2004, the more recent rejections differ in significant ways.

Conclusion

55. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel Swerdlow whose telephone number is 703-305-4088. The examiner can normally be reached on Monday through Friday between 8:00 AM and 4:30 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh H. Tran can be reached on 703-305-4040. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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17 March 2005



SINH TRAN
SUPERVISORY PATENT EXAMINER